Can Depletion Attenuate the Reverse Priming Effect of Slogans on Behaviour?

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Abstract

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Consumers are constantly exposed to marketing stimuli which influence them in different ways. For example, exposure to brands has a priming effect on consumers, such that consumers behave consistent with the brand's image. Exposure to slogans, however, generates a reverse priming effect, where consumers behave opposite to the brand's image (Laran, Dalton and Andrade, 2011). It is argued that these differences in behaviour occur because slogans, but not brands, are perceived as persuasion tactics by consumers. Yet, it seems plausible that when consumers are depleted (i.e., when they already engaged in a task that required self-control), and then shown a slogan, they may struggle to recognize the marketers' intent to persuade. It is also plausible that depleted consumers may struggle to resist persuasive tactics. In my thesis, I investigate these possibilities by testing whether depletion can attenuate the reverse priming effect of slogans. I also examine whether perceived persuasion intent predicts consumers behaviour. Across two studies, I show that when people are depleted, exposure to slogans led them to behave consistent with the brand's image; that is, depletion attenuated the reverse priming effect. This effect occurred when a traditional depletion manipulation was used, and when depletion was manipulated vicariously. I also show that exposure to slogans increased perceived persuasion intent ratings (relative to exposure to a brand) under nondepletion. Perceived persuasion intent ratings did not predict behaviour under nondepletion, nor did it predict behaviour under depletion.

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Introduction

Imagine that you are watching Black Panther, and you see the king of Wakanda fighting enemies on top of the Lexus GT. What effect does seeing the Lexus brand have on you, and would this effect be different if you instead saw the slogan, "Lexus. The Relentless Pursuit of Perfection?" Indeed, prior research suggests that these two marketing strategies (i.e., exposing consumers to brands, or exposing them to slogans) influence consumers in different ways (Laran et al., 2011). Exposure to a brand has been shown to have a priming effect on consumers, such that consumers behaved consistent with the brand's image. Exposure to a slogan, however, has been shown to generate a reverse priming effect, such that consumers behaved inconsistent with the brand's image. Laran et al. (2011) argue that slogans and brands produce different effects on consumers because consumers' perceptions of marketing strategies appear to differ: slogans (but not brands) are automatically perceived as a persuasion tactic by consumers.

Now, imagine the following: right before watching the Black Panther movie, you wrote a three-hour examination, full of hundreds of tough multiple-choice questions. You are most definitely feeling depleted! Do you think that exposure to the Lexus slogan would still generate the reverse priming effect? Prior research does not offer a definite answer to this question, since researchers are not clear if the act of resisting persuasive tactics (e.g., slogans) requires self-control or not (Ackerman, 2018). Thus, the first objective of my thesis is to investigate whether manipulating depletion (i.e., the amount of self-control resources we have) will differently impact the reverse priming effect on behaviour. Since people can also experience depletion by simply observing other people's exertion of self-control resources (Ackerman, 2018), the second objective of my research is to examine the effects of brands and slogans on behaviour when consumers are vicariously depleted. My third and final research objective is to test whether perceived persuasion intent mediates the relationship between depletion and slogan (brands) on consumer behaviour.

This research has the potential to contribute to the process model of depletion, and literatures on priming and branding. It may also help consumers better understand how exposure to brands and slogans can impact their behaviour while they are (vicariously) depleted. Moreover, this research may help marketing practitioners make decisions in terms of placing their brands and

slogans in situations where people are easily depleted (or vicariously depleted) to maximize its effectiveness.

The remainder of my thesis is organized as follows. First, I will present an overview of priming effects with respect to brands and slogans. Then, I will discuss the process model of depletion and vicarious depletion. The first two hypotheses follow after. Then, I will present an overview of the persuasion knowledge model and then propose my last hypothesis. The three hypotheses will be tested across two studies, and each study will start with a pretest. Finally, I will conclude with a discussion of the findings and the practical implications of this work, along with potential future research directions.

Literature Review

Brands, slogans, and priming

Considering the power of social media nowadays, encounters with brands and slogans are part of people's everyday experience. Consumers are often able to easily recall slogans for Nike, Subway, Walmart, Red Bull, and so on. Marketers use brands and slogans (in addition to other marketing strategies) in an attempt to shift consumers' preferences or decisions. While both brands and slogans serve the same purpose of enhancing brand equity, brands and slogans can be perceived differently. For example, brands are most known to display different personality traits, allowing consumers to develop humanlike relationships with brands (Aacker, 1997; Aaker, Fournier, and Brasel, 2004). Previous research also showed that brand names and logos, with their limited space, face restrictions on fully explaining a brand's position (Gunasti and Ross, 2010). With less information carried compared to slogans, a brand name or logo is often considered as a generic feature that every product must carry in the marketplace, and as a result, consumers are less likely to realize just how much brands can influence their purchasing behaviours. Brands can also build emotional attachments with consumers which is used by marketers to maximize their persuasion attempts. A practical example is brand anthropomorphism where marketers apply human characteristics to brands to establish emotional attachments; doing so does not appear to activate consumers' skepticism toward advertising. As a result, brands have been repeatedly proven to be less likely associated with skepticism.

However, slogans, designed to pair with brands, have a less obvious purpose of sales than brands do and are consequently perceived as more persuasive relative to brands (Laran et al. 2011). Slogans are more likely to be perceived as a persuasion tactic considering that its purpose is to add extra meaning or value to the brands' attributes (Dimofte and Yalch, 2007; Gunasti and Ross, 2010). Instead of focusing on brand equity, Fransen, Fennis, and Pruyn (2007) mentioned that slogans were frequently used to associate brands with personal goals and ambitions. This could be considered as attempts to violate individuals' free will or self-interest (Ackerman, 2018). Also, consumers can recognize that slogans can influence their behaviours, to a larger extent than brands can, considering that slogans serve to remind consumers of the brands' attributes.

Given that brands and slogans are perceived differently, it is not surprising that their effects on consumers also differ. For example, Laran et al. (2011) discussed that exposure to a brand had a priming effect on consumers such that consumers behave similarly to the brand's image. For example, subsequent spending behaviour was reduced when consumers were exposed to "Walmart," a brand associated with saving money. Exposure to slogans was shown to have a reverse priming effect on consumers such that consumers behaved opposite, or inconsistent, with the brand's image. For example, consumers increased their spending when they were first exposed to "Walmart. Save money. Live better." Laran et al. (2011) emphasized how slogans were construed as an undesirable source of influence. This line of thinking is similar to the two "processes" of reacting to a persuasive stimulus mentioned by Friestad and Wright (1994). One of the processes is recognizing, analyzing, interpreting, evaluating, and remembering. Consumers' countless experience in marketing tactics have helped them to identify biasing factors to influence purchase behaviour. Additionally, Friestad and Wright (1994) stated that the persuasion knowledge that is developed through such countless experiences could help consumers counterargue and negatively evaluate the source of persuasion, which is another process of reacting to persuasive stimulus. Previous research has proven that the process of correction toward persuasion exists to be the major cause of reverse priming effect. As consumers gain knowledge of marketing tactics from their prior experiences, the correction process requires less motivation to be activated. In fact, Laran et al. (2011) suggest that such a correction process may be automatic.

However, it has also been well established that conscious attention and motivation are required to avoid or correct persuasive messages (Kray, Leigh, and Adam, 2001; Martin, Seta and

Crelia, 1990). Ackerman (2018) also stated that the act of resisting persuasion requires self-control resources. More specifically, counterarguing persuasive information involves processing or absorbing the message, retrieving experience or generating new defending information knowledge, and implementing to counterargue. Each element of this process requires active control from individuals. Additionally, this process met the criteria that were used to identify whether an activity consumed self-control. Specifically, those criteria included engaging to reach a desired status and defending themselves from falling toward a natural tendency (Wheeler, Brinol, and Hermann, 2007). Since researchers are not clear if the act of resisting persuasive tactics (e.g., slogans) requires self-control or not, it is important to investigate how self-control might impact the reverse priming effect (of slogans) on behaviour. One model that can be used to determine if self-control is needed for a task, or not, is the depletion model, which is discussed next.

Process model of depletion

Self-control is identified as the fundamental ability for people to maintain effortful behaviours to achieve goals, and according to the depletion model, self-control is limited and finite (Baumeister and Heatherton, 1996; Baumeister, Heatherton, and Tice, 1994; Muraven and Baumeister, 2000). This means that when people participate in a first task that consumes self-control resources, they do not have enough resources left to engage in self-control during a subsequent task, leading to self-control failure. Inzlicht and Schmeichel (2012), however, proposed a different view of self-control in their process model of depletion. They stated that people go through a shift in motivation or attention after engaging in a self-control task on the first task (i.e., at Time 1), and this leads people to be less motivated or less attentive toward a cognitive signal of exerting self-control on the second task (i.e., at Time 2). Given that self-control failure has appeared in many aspects of social phenomena including criminality, obesity control, impulse purchase, alcoholism, and so on, past research has covered how to attenuate the depletion effect using goal priming (Walsh, 2014) and how to identify different forms of self-control (Inzlicht and Schmeichel, 2012). Past research has also shown how self-control failure can lead to higher acquiescent: that is, people are more likely to "cave in", and reach an agreement with others once their self-control resources are depleted (Baumeister and Heatherton, 1996). Thus, it seems important to look at the role of depletion when we consider the effect of a persuasive appeal (such as a slogan).

As mentioned earlier in my thesis, one of the processes of resisting a persuasive message (Friestad and Wright, 1994) involves retrieving experience to assess the level of persuasion and activate persuasion knowledge. Correcting, another process of resisting, requires people to apply persuasion knowledge to disprove the persuasive message. Both processes match the criteria of identifying self-control required activities in terms of achieving a desired goal and overcoming default behaviour (i.e., not to go along with what the message tells us). For example, Inzlicht and Schmeichel (2012) proposed that depleted individuals may fail to notice or become less sensitive toward cues that signal the need for exerting self-control resources. In this case, depleted consumers would fail to recognize the persuasive intent of slogans; if so, depleted consumers may not engage in the process of reacting, analyzing, interpreting, evaluating, and remembering. In other words, depleted consumers might not activate persuasion knowledge when presented with a slogan (i.e., a persuasive appeal), which may make them less likely to behave against the brand's image.

Further, the process model of depletion also proposes that depletion caused by a previous exertion of self-control resources should shift motivation orientation from overriding desires to increasing impulse strength. Specifically, an exertion of self-control at Time 1 can lead individuals to become less motivated to engage in further self-control and more motivated to act on impulse. Thus, even if depleted consumers recognize the persuasive intent of slogans, exerting self-control resources can result in shifting people's motivation to further self-control and decrease consumers' motivation to correct (which is another form of resisting persuasive messages). Taken together then, I expect that when consumers' self-control resources are diminished, we will not see evidence of a reverse priming effect of slogans on behaviour. Formally,

H1: The reverse priming effect of slogans on behaviour will be attenuated when people are depleted, leading them to behave in ways that are implied by the brand's image.

Vicarious depletion

Imagine you are watching the Game 1 of the NBA Finals, how does seeing your favourite team battling all night affect your level of self-control? The process model of depletion, despite its many advances and improvements, has largely been studied on the "individual" level: that is, an individual is depleted at Time 1, and their performance on a subsequent task requiring self-control

is measured at Time 2. However, we are living in a world with high social exposure that has allowed us to evolve in sharing information for teamwork, socializing, attracting followers, and so on. Considering that people exert self-control in everyday activities, and that these (depleting) experiences are then often shared with others, consumers are most definitely exposed to other people's self-control actions. Vicarious depletion was developed by Ackerman, Goldstein, Shapiro, and Bargh (2009) and is defined as the process of how others' self-control actions can impact our level of self-control when we put ourselves into his or her shoes. As a form of depletion, vicarious depletion was firstly developed from the concept of social perception, which explains that exposure to social information has allowed people to evolve themselves by mimicking others (i.e., expressing similar emotions, ideas, and perceptions). This process has also allowed people to be easily affected by others' thoughts and actions unconsciously. For example, Chartrand and Bargh (1996) found that exposure to other people's behaviour can bring out the same behaviour of oneself.

Ackerman et al. (2009) mentioned that simulation is the mechanics behind the social perception that helps people to bridge the mental perception of other people's actions and the consequences of the actions. This simulation helps the observer to create an imaginary scenario from observing a targeted person to experience the current states of the actor and also the consequences of those states. One of the methods of simulation is perspective taking. Taking the perspective of other people could generate similar results, such as feelings of pain and cognitive dissonance (Ackerman et al., 2009). Applying the same logic of simulation, taking perspectives of other people exerting self-control resources could also allow the observer to see the corresponding consequences. For example, taking the perspective of a friend who is on a diet and avoids fast food is likely to lead the observer to be depleted by the self-control exerted by that friend. Similarly, past research also concluded that people can improve their anagram performance after observing other people consuming caffeine or sleeping. In line with persuasive messages, one study by Ackerman (2018) proved that vicariously depleted people who reported a high connection with another person tend to show more susceptibility toward persuasive messages. Thus, I expect that when consumers' self-control resources are vicariously depleted, we will not see evidence of a reverse priming effect of slogans on behaviour. Specifically, this research predicts,

H2: The reverse priming effect will be attenuated when consumers experience vicarious depletion, leading them to behave in ways that are implied by the brand's image.

Persuasion knowledge model

To further understand the reverse priming effect of slogans on behaviour (especially under depletion), I turned to the persuasion knowledge model. The persuasion knowledge model was first established by Friestad and Wright (1994) who explained the factors and mechanics behind how persuasive strategies impact consumer behaviour. This model conceptualizes persuasion based on the points of view of two subjects. The first subject is termed the "target," and it refers to the people that a persuasion intent is targeted at (e.g., consumers). The second subject, termed the "agent," refers to the people who are responsible for designing, performing, and displaying the persuasion intent (e.g., a salesperson, advertising companies, and copywriters). Both subjects hold three types of knowledge that shape how the "target" perceives the persuasion intent, how the "agent" displays the persuasion intent, and the outcome of the persuasion intent. The first is coined persuasive knowledge: this type of knowledge is developed through past experiences, and it helps the target deal with everyday persuasion encounters. The second, termed agent knowledge, includes understandings and beliefs about the purpose of being an agent. The final type of knowledge, topic knowledge, is built upon how both subjects perceive the message within the persuasion intents. Friestad and Wright (1994) stated that all three types of knowledge are activated when consumers are exposed to persuasion intents. Although consumers may allocate different amounts of mental resources to each of these three types of knowledge based on different consumers' perceptions of the agent behaviour, activating any type of knowledge is said to require either attention or motivation.

On the perspective of motivation, considering different companies (agents) updating marketing strategies and coming up different forms of persuasion intents, consumers also constantly update their persuasion knowledge so that they could have complete perceptions toward persuasion intents and "agent" behaviours. Consumers' motivation to improve persuasion coping behaviours that react to various agent behaviours is the psychological mechanism of this process. By improving persuasion coping ability, consumers are able to make more accurate decisions when exposed to persuasion intents in terms of increasing memory capacity for various agent behaviours, identifying the characteristics of various agent behaviours, sharpening the three types of knowledge bases to be more accurate, and so on. When consumers become depleted, there may be

a shift in in motivation that could lessen consumers' desire to improve persuasion coping behaviours.

On the perspective of attention, consumers' attention is one of the mediums that allows persuasion knowledge to guide consumers in creating e a reliable perception of persuasion intents. Indeed, Friestad and Wright (1994) proposed that consumers hold beliefs that the core of the persuasion intents is to influence psychological factors such as curiosity and attention. Thus, when a marketing strategy that exhibits the trend of affecting those psychological factors, consumers will start to raise the level of perceived persuasion. Compared to brands that are only considered to be a generic feature that comes with every product, slogans are more likely to be perceived as persuasive tactics because short phrases carry more and unobvious information that could be used by consumers to analyze if a connection between the information and potential impact on psychological factors could be reached. While perceived persuasion may vary between slogans and brands under conditions of nondepletion, depleted consumers may not pay enough attention to the cues signaling to activate persuasion knowledge. This shift in motivation and attention is likely to decrease the effectiveness of applying persuasion knowledge on perceived persuasion. Thus, I predict that under nondepletion, consumers are attentive enough to recognize the persuasive intent from slogans and motivated enough to react against the persuasive intent. I also predict that when consumers' self-control resources are diminished, that they will experience a shift in attention, which will reduce their level of spotting the persuasive intent leading a lower level of perceived persuasion from slogans. Formally,

H3: Under nondepletion, exposure to a slogan will lead to an increase in perceived persuasion ratings relative to exposure to a brand, which leads to inconsistent behaviours with brand's image; however, under depletion, exposure to a slogan will generate perceived persuasion ratings that are similar to those caused by exposure to a brand, which will predict behaviours in line with brand's image.

Study 1

The purpose of the first study is to examine the first hypothesis that the reverse priming effect of slogans on behaviour will be attenuated when people are depleted, leading them to behave

in ways that are implied by the brand's image. To examine this, I first manipulated whether participants were depleted, or not. Then, participants were exposed to either a brand (Walmart) or a slogan (Walmart. Save Money. Live Better.) Finally, participant's thriftiness was assessed through a measure of willingness-to-spend (WTS).

Pretest

A pretest with 50 participants (24% women; M_{age} = 33.30, SD = 8.84), recruited from Amazon's Mechanical Turk (MTurk), was conducted to ensure that the Walmart brand is associated with the concept of saving, and that this perception does not change as a function of whether people see the brand (e.g., Walmart) or if the slogan is also presented (e.g., Walmart. Save money. Live better.). In this pretest, participants were told that they would see two marketing-related stimuli (e.g., a logo, a brand, or a print ad), and that beneath each stimulus, they would be asked a single question. Participants were randomly assigned to either a brand condition, or to a slogan condition. In the brand condition, they were exposed to brand logos for Bed Bath and Beyond and Walmart (shown individually). Bed Bath and Beyond was identified as a neutral brand in previous research (Laran et al., 2011) and was added to the pretest as a filler; responses were not analysed. Similarly, Walmart has been shown in previous research to be associated the concept of saving (Laran et al., 2011). In the slogan condition, they saw the same brands, but this time the corresponding slogans were added (see appendix A). For each marketing-related stimuli, participants were then asked to answer a question that measured the extent to which they associated the stimuli with savings or spending, on a 7-point scale (1 = "totally associated with saving," and 7 = "totally associated with spending"). Lastly, participants were asked to complete standard demographic questions (e.g., age, gender) and were thanked for their participation.

The results showed that the brand (Walmart) and the slogan (Walmart. Save money. Live better) were both significantly different from the midpoint on the 7-point scale (M_{brand} = 2.92, SD = 1.63; $t(24) = -3.31$, $p < .01$; M_{slogan} = 3.2, SD = 1.85; $t(24) = -2.16$, $p = .04$). This shows that participants perceive the Walmart brand to be closely associated with the concept of saving. Further, participants' perception of the Walmart brand was not significantly different from each other ($F(1, 48) = .32$, p = .57), indicating that perceptions did not change as a function of whether the brand, or slogan, was presented.

Design and participants

Two hundred and eighty-one participants were recruited using MTurk and participated in the 2 (marketing cue: brand versus slogan) × 2 (depletion: nondepletion versus depletion) between-participants experiment in exchange for monetary compensation ($1.30 US). Participants were randomly assigned to one of the four conditions.

Procedure

Participants were told that they would be completing three unrelated tasks. In the first task, "Word Puzzles," participants completed an anagram task, which required participants to form a correct English word using unscrambled letters. This task, similar to other tasks featuring problem-solving, has been used in previous studies on the effect of depletion (Walsh, 2014). The task will serve the same purpose to randomly assign participants to either a depletion condition or a nondepletion condition. Participants in the nondepletion condition were given hints to make the anagrams easier to complete (e.g., C D E E I T X (Hint: an emotion): _____), whereas those in the depletion condition were not given any hints (e.g., C D E E I T X: _____). Participants in both conditions were instructed that they would have 2 minutes to complete the task and they did not have to spend too much time on each one word. An "arrow" would display for participants to advance once 1 minute passed, and the page will automatically advance once 2 minutes passed. After the depletion manipulation, participants were immediately asked to rate how effortful they found this task (1 = "Not at all effortful" to 7 ="Very effortful") and to indicate how much they forced themselves to work on this task (1= "Not at all" to 7 = "Fully"). Participants were then asked to complete a mood measure on a 7-point Likert scale (1 = "Definitely do not feel" to 7 = "Definitely feel") that included two positive mood items (pleasant, pleased) and three negative mood items (depressed, unhappy, in a bad mood; Walsh, 2014).

For the second task, "All About Blogs," participants were asked to review a blog. They were shown a screenshot of a blogger's introduction page and were told that they would have 2 minutes to review the page, and that after the 2 minutes, the page would automatically advance, and that they would be asked a series of questions regarding the content of the blog. In reality, this task was deigned to manipulate which marketing cue they would be exposed to. Specifically, those in the brand condition saw an ad for "Walmart", which was placed at the bottom, right-hand corner

of the screenshot; those in the slogan condition saw a similar ad, but this time the slogan "Save Money. Live Better" was added (see appendix B for the screenshot of the blog, and the questions that followed).

For the third task, which was called "Consumer Insights," participants were required to fill out a ten-question survey that covered various topics, from the impact of "middleman" on suppliers to how participants balance work and other obligations. Because previous research has highlighted the importance of goal importance on behaviour, I also measured participants' importance towards the savings goal. Thus, embedded in the survey was a question to measure participants' importance of saving money (1 = "Not at all," to 7 = "Very important"). Also, Fiske and Taylor (1984) demonstrated that the content of negative stereotypes toward marketing are mainly consisted of beliefs, feelings, beliefs and exemplars. Thus, in this study, I also measured brand attitudes toward Walmart using a measure that has been used in prior research (Darke and Ritchie, 2007): bad/good, useless/useful, positive/negative, favourable/unfavourable, and appealing/not appealing.

The fourth task was called "Shopping Decisions," and in this task, participants were asked to imagine the following: "Imagine you want to go shopping and you are wondering whether you should spend a lot of money or try to save money during your shopping trip. Indicate below how much money you would be willing to spend when shopping." A slider bar would be available for participants to choose from $0 to $500. This was used to assess participants willingness-to-spend and has been used in prior research (Laran et al., 2011).

Lastly, participants completed standard demographic questions and funneled debriefing questions. Funneled debriefing questions were used to check if participants noticed if the performance of any of four tasks influence how they react to another. Also, participants were asked to indicate their perceptions of the purpose of the study in a few sentences. They were thanked for their participation.

Results

Data exclusion criteria

Participants were removed prior to data analysis using the following three criteria. First, participants were removed if they failed the (depletion) manipulation check and/or submitted incomplete data. Based on these criteria, I removed 4 participants who left the (depletion) anagram task blank, and 2 others were removed for failing the manipulation check (i.e., these participants reported that they felt depleted when they were in the nondepletion condition). Second, participants were removed if their mean presented extreme outliers (i.e., 3 standard deviations from the condition means); however, in this study all the means met these criteria. Third, I looked for extreme inconsistencies which may indicate that the participant was not paying attention to the tasks. Using this criteria, 7 participants were removed for providing inconsistent measures of the depletion manipulation check (i.e., saying that they were feeling both depleted and nondepleted), 2 participants were removed based on inconsistent mood measures, and 5 others were removed for providing inconsistent attitudes toward Walmart. Taken together, 20 participants (7.11% of the sample) were removed. The remaining 261 participants (99 were women) had an average age of 34.84 (SD = 9.37).

Manipulation check for depletion

I created a variable that assessed the extent to which participants felt depleted while completing the anagram task (i.e., the depletion manipulation). This measure was averaged from their answers to two questions: how effortful they felt the anagram task was, and the extent to which they forced themselves to work on the anagram task (Cronbach's $\alpha = .84$). As expected, participants assigned to the depletion condition indicated that completing the anagram task was more depleting ($M = 5.35$, SD = 1.41) compared to participants in the nondepletion condition ($M = 2.91$, SD = 1.70; $F(1, 259) = 158.44$, $p < .01$).

Effect of depletion on mood

Rather unexpectedly, the depletion manipulation was shown to impact mood: the difference between the average positive mood measure (Cronbach's $\alpha = .87$) among participants assigned to the depletion condition ($M = 5.18$, SD = 1.29) and those among participants in the

nondepletion condition (M = 4.03, SD = 1.45) was significant; $F(1, 259) = 45.62$, $p < .01$. There was also a significant difference between the average negative mood rating (Cronbach's α = .94) among depleted participants (M = 3.75, SD = 1.41) and those among participants in the nondepletion condition (M = 2.89, SD = 1.35; $F(1, 259) = 25.39$, $p < .01$). Since the manipulation of depletion had significant effects on both positive and negative mood ratings, I conducted two one-way ANOVAs to test whether they impacted the willingness-to-spend (WTS) measure. The result of the first ANOVA, using positive mood, was not significant ($F(1, 259) = .16$, $p = .69$). Similarly, the result of the second ANOVA, using negative mood, was not significant ($F(1, 259) = 2.58$, $p = .11$). These results indicate that neither positive, nor negative, mood ratings significantly impact the WTS measure.

Testing for potential covariates

Brand attitudes. First, I tested whether brand attitudes (towards Walmart) should be controlled for in my analyses, given that the correlation between brand attitude and WTS was significant ($r = .24$, $p < .01$). The results of a first ANOVA yielded a nonsignificant marketing cue × depletion interaction on brand attitude ($F(1, 257) = .40$, $p = .53$). This indicates that there were no significant differences among conditions on brand attitude, which showed the homogeneity of variance. A second ANOVA yielded a nonsignificant effect of marketing cue × depletion × brand attitude on WTS ($F(1, 253) = .83$, $p = .36$), passing the assumption of homogeneity of regression. Given these results, brand attitude was included as a covariate in all analyses.

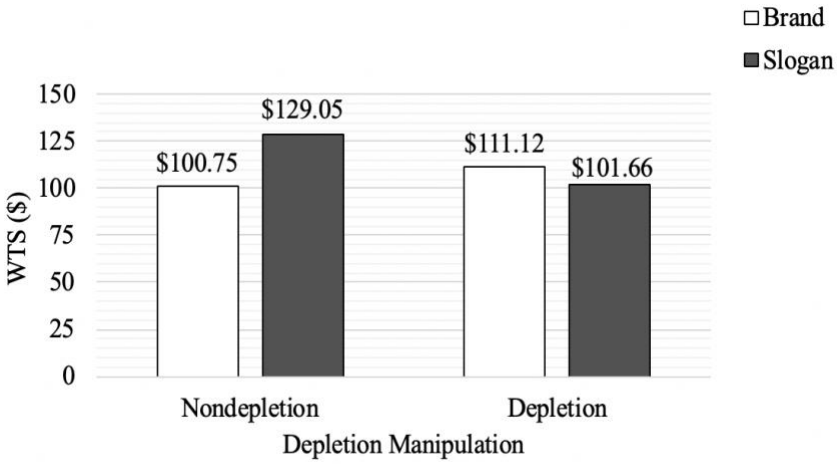
Income. There was a significant correlation between income and WTS ($r = .24$, $p < .01$), so I conducted similar analyses on this variable. First, the effect of marketing cue and depletion on income was not statistically significant ($F(1, 257) = .73$, $p = .39$), passing the homogeneity of variance assumption. Further, the interaction of marketing cue × depletion × brand attitude on WTS was not significant ($F(1, 253) = 1.31$, $p = .25$), passing the assumption of homogeneity of regression. Thus, income was also included as a covariate in future analyses.

Willingness-to-spend

The analysis of difference in participants' willingness-to-spend (WTS) was conducted using model 1 of PROCESS (Hayes, 2012). The marketing cue that participants were exposed to

was entered as the independent variable, willingness-to-spend was entered as the dependent variable, and depletion condition was entered as the moderator. Brand attitude and income were entered as covariates. The results indicated a marginally significant effect of marketing cue on WTS (b = 28.31, t(255) = 1.90, p = .06), indicating that participants had a higher willingness-to-spend when exposed to a slogan relative to when they saw just a brand. Though the effect of depletion on WTS was not significant (b = 10.37, t(255) = .69, p = .49), the results did yield a marginally significant interaction between marketing cue and depletion on WTS (b = -37.76, t(255) = -1.80, p = .07); see figure 1.

Figure 1. Marketing cue × depletion interaction on WTS (study 1)



Note: Estimates are based on setting covariates to their means: income = 3.27, and attitude to Walmart = 4.56.

More specifically, in the nondepletion condition, participants were willing to spend more when exposed to a slogan (M = 129.05, SD = 107.29) compared to those who were exposed to a brand (M = 100.75, SD = 72.35; b = 28.31, t(255) = 1.90, p = .06), providing support for the reverse priming effect of slogans (Laran et al., 2011). In the depletion condition, however, there was no significant difference in the amount participants were willing-to-spend across conditions (M_{slogan} = 101.66, SD = 71.37; M_{brand} = 111.12, SD = 96.86; b = 9.46, t(255) = -.64, p = .52). This finding lends support to H1, such that when people are depleted, they behave in ways that are implied by the brand's image. Additional analyses showed that nondepleted participants exposed

to a brand were willing to spend the same as depleted participants exposed to the brand (b = 10.37, $t(255)$ = .69, p = .49). Further, nondepleted participants exposed to a slogan reported a marginally significant higher WTS related to depleted participants exposed to a slogan (b = -37.76, $t(255)$ = -1.80, p = .07).

Additional analyses

I also ran a series of additional analyses examining whether importance of a savings goal differed across conditions. First, I tested whether (savings) goal importance differed across conditions conducting an ANOVA with goal importance as the dependent variable, and depletion and marketing cue as the independent variables. The results yielded no significant main effects (depletion: F(1, 257) =.23, p = .64; marketing cue: F(1, 257) =.11, p = .74), nor a significant interaction (F(1, 257) =.83, p = .36); the top row of table 1 presents the means and standard deviations in each of the four conditions. For the sake of completeness, I also tested whether goal importance impacted the WTS measure (by condition) and found no significant relationships (all p > .34); see the bottom row of table 1, which provides the correlations (and p-values).

Table 1. Mean importance of the saving goal, and correlations between goal importance and WTS (study 1)

	Nondepletion		Depletion	
	Brand	Slogan	Brand	Slogan
Goal importance	5.91 (1.19)	6.08 (1.10)	6.09 (.94)	6.02 (1.16)
Correlation between goal importance and WTS	-.05 (.70)	-.03 (.83)	-.12 (.34)	-.09 (.48)

Note: The values in parentheses represent the standard deviations for the goal importance measure (top row) and *p*-values for the correlations (bottom row).

Discussion

The support for my first hypothesis is found from the results of Study 1 where the effect of depletion can attenuate the reverse priming effect of slogans: that is, depleted participants were willing to spend less when exposed to a slogan than nondepleted participants who were exposed to a slogan. Previous research on the process model of depletion often focuses on exploring conditions that could attenuate the *negative* effect of self-control failure. Instead, the findings of Study 1 show a specific case where self-control failure actually worked in consumers' favour (in terms of less spending). Additionally, the results of Study 1 also provide support for previous research on confirming the reverse priming effect of slogans where nondepleted participants were willing to spend less when exposed to a slogan than those who exposed to a brand. Study 2 will extend these findings by examining if the reverse priming effect can be attenuated when participants are vicariously depleted. Also, perceived persuasion will be assessed to test the potential role it has on the reverse priming effect of slogans on behaviour.

Study 2

In order to increase the generalizability of my findings, a different brand associated with the concept of saving (e.g., Home Depot) was implemented in Study 2. Also, the role of vicarious depletion, another form of depletion, was used to test my second hypothesis. I also included a new measure, perceived persuasion intent, to study its effect on the relationship between exposure to marketing cue and WTS (which is the basis for my third hypothesis).

In this study, I first manipulated whether participants were assigned to a condition of vicarious depletion or not: that is, participants were either instructed to take the perspective of a writer of a given story, or participants were given no such instruction. Then, participants in the brand condition were exposed to "Home Depot", whereas those in the slogan condition saw "Home Depot. More Saving. More Doing". The measure of perceived persuasion was recorded next. Finally, participants' thriftiness was assessed through the same willingness-to-spend measure as was used in study 1.

Pretest

A pretest with 50 participants (34% women; M_{age} = 35.44, SD = 12.97) recruited from MTurk was conducted to ensure that participants perceived that the Home Depot brand was associated with savings, and that this perception did not change as a function of whether participants see the brand alone (e.g., "Home Depot") or if its slogan is shown (e.g., "Home Depot. More Saving. More Doing".) In this pretest, participants were told that they would see two marketing-related stimuli (e.g., a logo, a brand, or a print ad), and that beneath each stimulus, they will be asked a single question. Participants were randomly assigned to either a brand condition, or to a slogan condition. In the brand condition, they were exposed to brand logos for Tiffany and Home Depot, shown individually. Tiffany was identified as a brand associated with the concept of spending in previous research (Laran et al., 2012) and was added to the pretest as a filler; responses were not analysed. In the slogan condition, they were shown slogans of Tiffany and Home Depot (see appendix C). For each marketing cue, participants were then asked to answer a question that measured the extent to which they associated the stimuli with savings or spending, on a 7-point scale (1 = "totally associated with saving," and 7 = "totally associated with spending"). Lastly, participants were asked to complete standard demographic questions (e.g., age, gender) and were thanked for their participation.

The results showed that the brand (Home Depot) and the slogan (Home Depot. More Saving. More Doing) were both significantly different from the midpoint on the 7-point scale (M_{brand} = 3.20, SD = 1.50; $t(24) = -2.67$, $p = .01$; M_{slogan} = 2.72, SD = 1.88; $t(24) = -3.40$, $p < .01$). Further, participants' perception of the Home Depot brand was not significantly different from each other: $F(1, 48) = 1.23$, $p = .27$. As expected, participants perceived the Home Depot brand to be closely associated with savings, and the perception of this brand did not change as a function of whether the slogan was also presented or not.

Design and participants

Two hundred and eighty-three participants were recruited using MTurk participated in the 2 (marketing cue: brand versus slogan) × 2 (vicarious depletion: nondepletion versus depletion) between-participants experiment in exchange for monetary compensation ($1.30 US). Participants were randomly assigned to one of the four conditions.

Procedure

The procedure for this study was similar to study 1. Participants were first randomly assigned into two conditions for the first task, "Story Reading." All participants were given 3 minutes to read a story. They were told that although the page would automatically advance after 3 minutes, they were allowed to advance after 1 minute if they finished reading the story before then. The story (written in the first person) was about a server who arrived at work without having eaten that day but had to serve delicious food throughout their shift. Eating food "on the job" could result in being fired; therefore, the server must spend a large amount of self-control. Participants in the nondepletion condition were asked to simply read the story, while participants in the depletion condition were instructed to "to take the perspective of the person who wrote it. That is, try to really imagine yourself in his or her shoes, and concentrate on trying to imagine what the person was thinking and how he or she was feeling" (instructions adapted from Goldstenin and Cialdini, 2007). After reading the story, participants were first asked to answer three easy questions regarding the content of the story to ensure that participants were in fact reading the story (see appendix D for a copy of the story, as well as the three questions used as an attention check).

Second, participants rated their self-concept by indicated how compassionate, sympathetic, warm and helpful they are, on a scale from 1 to 7 ("1" = strongly disagree, "7" = strongly agree; Khan and Dhar, 2006). I included this measure to make sure that the story (i.e., the depletion manipulation) did not unintentionally create a "licensing effect": that is, I had to ensure that reading the story did not increase the belief that one is a good person, licensing them to spend more later. Third, participants completed the Brief Mood Introspection Scale (BMIS; Mayer and Gaschke, 1988), which has been used in previous studies of depletion to measure potential mood valence and arousal by answering how much they were feeling a specific emotion, which includes eight positive items (lively, happy, caring, content, peppy, calm, loving, active) and eight negative items (sad, tired, gloomy, jittery, drowsy, grouchy, nervous, fed up), each on a 7-point scale ("1" = definitely do not feel, "7" = definitely feel). Fourth, I asked them to also indicate if they felt "exhausted" and "unable to concentrate," both on 7-point scales ("1" = definitely do not feel, "7" = definitely feel) to assess how much participants were feeling depleted (adapted from Clarkson, Hirt, Jia, and Alexander, 2010 and Egan, Hirt, and Karpen, 2012). Lastly, participants answered

how the writer of the story feels on a scale from 1 to 7 ("1" = frustrated, "7" = calm); Ackerman, Goldstein, Shapiro, and Bargh (2009).

For the second task, "All About Blogs," participants were asked to review a blog. Under the same blog settings as study 1, "Home Depot" was placed at the right-hand, bottom corner of the screenshot for those in the brand condition, while "Home Depot. More Saving. More Doing" was used in the slogan condition (see appendix E). Participants were given thirty seconds to read through the blog, and after 30 seconds, the page would automatically advance. Participants then had to answer the same set of questions about the blog as they did in study 1, with one exception: all participants had to also answer the following question: "Do you think that marketers advertise on blogs (just like "Home Depot"/ "Home Depot. More Saving. More Doing." advertised itself on the blog you just saw) in an attempt to persuade you?" on a scale from 1 ("not at all") to 7 ("very much"); Laran et al., 2011. This question was used to assess perceived persuasion intent.

The third task, "Consumer Insights," was identical to the survey used in study 1 with 1 exception: here I measured brand attitudes toward Home Depot (instead of Walmart). The procedure for the fourth task "Shopping Decisions," was identical to that used in study 1. Lastly, participants completed standard demographic questions and funneled debriefing questions, also similar to study 1. They were then thanked for their participation.

Results

Data exclusion criteria

Similar to study 1, participants were removed prior to data analysis using the following three criteria. First, participants were removed if they failed the (depletion) manipulation check and/or submitted incomplete data. Based on these criteria, three participants were removed for failing the manipulation check (i.e., these participants reported that they felt depleted when they were in the nondepletion condition). Second, participants were removed if their mean presented extreme outliers (i.e., 3 standard deviations from the condition means). Here, I removed six participants for presenting outliers for their willingness-to-spend. Third, I looked for extreme inconsistencies which may indicate that the participant was not paying attention to the tasks. Using these criteria, 1 participant was removed for providing inconsistent measures of the depletion

manipulation check (i.e., saying that they were feeling both depleted and nondepleted), and 14 participants were removed based on inconsistent mood measures. I also looked at their performance on the attention test (i.e., their ability to answer the easy questions based on the story reading task) and removed 7 participants who only answered 1 of the three question correctly. Taken together, 31 participants (10.95% of the sample) were removed. The remaining 252 participants (100 were women) had an average age of 35.67 (SD = 10.76).

Manipulation check for depletion

I created a variable that assessed the extent to which participants felt depleted by averaging their answers to two questions: how exhausted they felt after reading the story, and the extent to which they felt unable to concentrate (Cronbach's α = .72). Rather unexpectedly, there was no difference in this measure across conditions ($M_{depletion}$ = 2.02, SD = 1.46; $M_{nondepletion}$ = 1.83, SD = 1.11; $F(1, 250) = 1.34$, $p = .25$).

Although the Cronbach alpha reported is often considered acceptable, I ran a correlation on these variables, and found that although it was significant, the relationship was moderate ($r = .58$, $p < .01$). Thus, I looked at each variable separately, wondering if perhaps one of the measures was a better assessment of depletion than the other (especially given that there are no established manipulation checks for the measure of depletion I used in this study). In doing so, I found that although depleted and nondepleted participants did not differ in how exhausted they felt ($M_{depletion}$ = 2.18, SD = 1.73; $M_{nondepletion}$ = 2.12, SD = 1.59; $F(1, 250) = .10$, $p = .75$); they did differ in their ability to concentrate: depleted participants reported a lower ability to concentrate ($M_{depletion}$ = 1.86, SD = 1.45) relative to nondepleted participants ($M_{nondepletion}$ = 1.55, SD = 1.01; $F(1, 250) = 3.95$, $p = .05$).

Effect of depletion on self-concept

Self-concept items (Cronbach's α = 90) was averaged by compassionate, sympathetic, warm, and helpful. There was no significant difference between the average self-concept among depleted participants (M = 5.79, SD = .99) and those among participants in the nondepletion condition (M = 5.79, SD = .94; $F(1, 250) < .01$, $p = .99$), illustrating that participants were not self-licensed by the story given.

Effect of depletion on mood

The difference between the average positive mood measures (Cronbach's α = .90) among participants assigned to the depletion condition (M = 4.27, SD = 1.41) and those among participants in the nondepletion condition (M = 4.43, SD = 1.28) was not significant (F(1, 250) = .86, p = .35). Similarly, there was no significant difference between the average negative mood rating (Cronbach's α = .91) among depleted participants (M = 1.94, SD = 1.15) and those among participants in the nondepletion condition (M = 1.98, SD = 1.15; F(1, 250) = .08, p = .78).

Effect of depletion on "how the writer felt"

I first conducted a one-sample test against the midpoint ("4") for participants in the nondepletion condition and found that these participants felt that the writer of the story was frustrated (M = 2.28, SD = 1.49; t(124) = -13.01, p < .01). I conducted a similar analysis using depleted participants and found that they too felt that the writer of the story was frustrated (M = 2.06, SD = 1.27; t(124) = -17.17, p < .01). Further, the effect of depletion did not affect this evaluation (F(1, 250) = 1.58, p = .21).

Testing for covariates

Brand attitudes. First, I tested whether brand attitudes (towards Home Depot) should be controlled for in my analyses. The correlation between brand attitude and WTS was not significant (r = .05, p = .43), thus, it was not included as a covariate in further analysis.

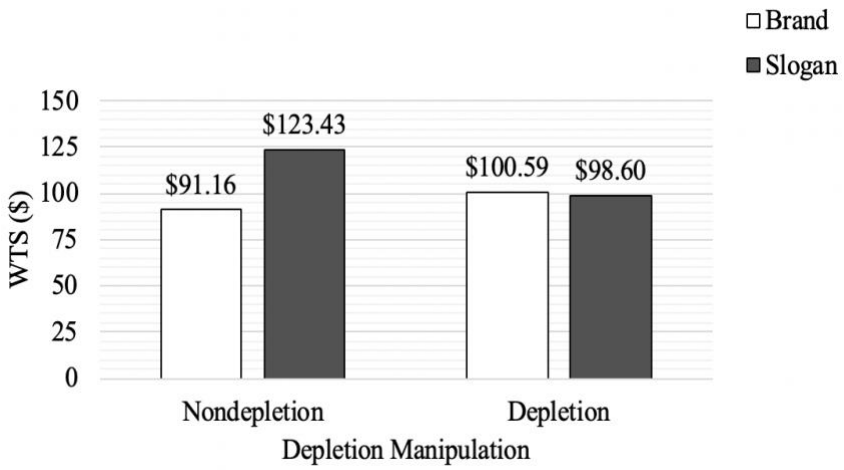
Income. There was a significant correlation between income and WTS (r = .15, p = .02), thus I examined whether it should be controlled for in my analyses. However, the results of an ANOVA yielded a significant marketing cue × depletion interaction on income (F(1, 248) = 7.71, p = .01), indicating that income did not pass the homogeneity of variance assumption. Thus, it was not included as a covariate in further analysis.

Effect of marketing cue and depletion on willingness-to-spend

The analysis of the difference in participants' willingness-to-spend was conducted using model 1 of PROCESS (Hayes, 2012). The marketing cue that participants were exposed to was entered as the independent variable, willingness-to-spend was entered as the dependent variable,

and vicarious depletion was entered as the moderator. As expected, the results indicated a main effect of marketing cue (b = 32.27, t(248) = 2.57, p = .01), indicating that participants have a higher willingness-to-spend when exposed to a slogan relative to a brand. Though the effect of depletion on WTS was not significant (b = 9.42, t(248) = .76, p = .44), the results did yield a significant interaction between marketing cue and vicarious depletion on WTS (b = -34.26, t(248) = -1.91, p = .06); see figure 2.

Figure 2. Marketing cue × vicarious depletion interaction on WTS (study 2)



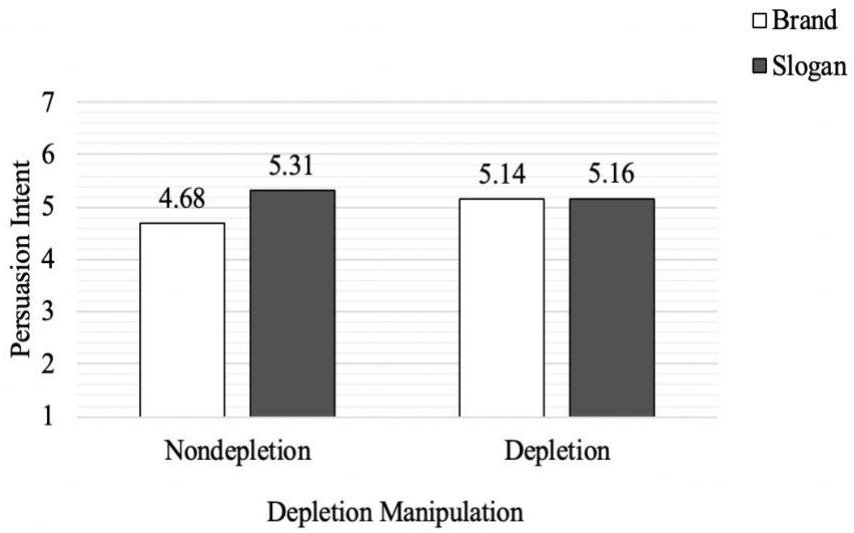
Specifically, in the nondepletion condition, participants were willing to spend more when exposed to a slogan (M = 123.43, SD = 92.53) compared to those who exposed to brand only (M = 91.16, SD = 55.88; b = 32.27, t(248) = 2.57, p = .01). This finding is consistent with the reverse priming effect of slogans. In the depletion condition, there was no significant difference in the amount participants were WTS across conditions (M_{brand} =100.59, SD = 71.46; M_{slogan} = 98.60, SD = 52.89; b = 1.99, t(248) = .16, p = .88). Additional testing showed that depletion did not impact WTS when participants were exposed to a brand (b = 9.42, t(248) = .76, p = .45). However, it did impact slogan exposure, such that nondepleted participants spend significantly more relative to those who were depleted (b = -34.26, t(248) = -1.91, p = .06).

Effect of marketing cue and depletion on perceived persuasion intent

The analysis of the difference in participants' perceived persuasion intent was conducted using model 1 of PROCESS (Hayes, 2012). The marketing cue that participants were exposed to

was entered as the independent variable, the perceived persuasion intent rating was entered as the dependent variable, and vicarious depletion was entered as the moderator. As expected, the results indicated a main effect of marketing cue (b = .63, t(248) = 2.19, p = .03), indicating that participants perceived higher persuasion toward a slogan than to a brand. Though the effect of depletion on the perceived persuasion was marginally significant (b = .47, t(248) = 1.65, p = .10), the results did not yield a significant interaction between marketing cue and vicarious depletion on the perceived persuasion intent (b = -.61, t(248) = -1.49, p = .14); see figure 3.

Figure 3. Marketing cue × vicarious depletion interaction on perceived persuasion intent (study 2)



Specifically, in the nondepletion condition, participants reported higher level of perceived persuasion toward a slogan (M = 5.31, SD = 1.50) than those did toward brand (M = 4.68, SD = 1.78; b = 32.27, t(248) = 2.57, p = .01). The results of this study also showed that there was no significant difference in the level of perceived persuasion under depletion (M_{brand} = 5.14, SD = 1.64; M_{slogan}= 5.16, SD = 1.54; b = -.02, t(248) = -.07, p = .94). Taken together, these results provided partial support for H3. Additional testing showed that depletion did not significantly impact the perceived persuasion in the brand conditions (b = .14, t(248) = .49, p = .63), nor did depletion impact persuasion intent across the two slogan conditions (b = -.61, t(248) = -1.49, p = .14).

Effect of persuasion intent on WTS

I was also proposing in hypothesis 3 that perceived persuasion intent would predict behaviour: that is, perceived persuasion ratings should predict willingness-to-spend. However, I was not able to find evidence for this. That is, the relationship between perceived persuasion intent and WTS (where perceived persuasion was considered as the independent variable and WTS was considered as the dependent variable) yielded a nonsignificant effect (b = 1.44, SE = 2.77; t(249) = .52, p = .61). Further, the correlation between perceived persuasion intent and WTS in each condition indicated a nonsignificant pattern again (see table 2).

Table 2. Correlations between perceived persuasion intent and WTS (study 2)

	Nondepletion		Depletion	
	Brand	Slogan	Brand	Slogan
Correlation between perceived persuasion and WTS	.12 (.36)	-.12 (.33)	.004 (.76)	.10 (.45)

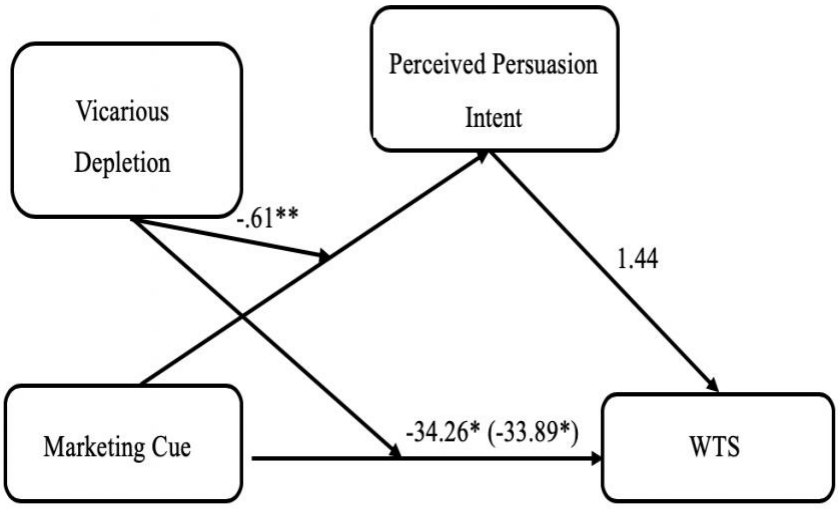
Note: p-values are presented in parenthesis.

Mediation analysis

Though the nonsignificant effect of persuasion intent on WTS was not as expected, I continued testing the mediating effect of perceived persuasion based on PROCESS using Model 8 proposed by Preacher, Rucker, and Hayes (2007) to ensure the completeness of the analysis (see appendix F for the complete SPSS output). The analysis used marketing cue as the independent variable, WTS as the dependent variable, perceived persuasion as the mediating variable, and vicarious depletion as the moderating variable. The results showed that the effect of perceived persuasion was not significantly influenced by the interaction between marketing cue and depletion (b = -.61, t(248) = -1.49, p = .14). Additionally, the results yielded a nonsignificant effect of perceived persuasion on WTS (b = 1.44, t(249) = .52, p = .61). The total effect (b = -34.26, t(248) = -1.91, p = .06) of the exposure to marketing cue × depletion interaction on WTS

decreased (b = -33.89, t(247) = -1.88, p = .06) when the mediator (perceived persuasion intent) was added in the model (see figure 4).

Figure 4. Mediation analysis (study 2)



Notes: Direct effects represent the standardized regression coefficient. The values inside parentheses represent the standardized regression coefficient when the proposed mediator is added in the model. *p = .06. **p = .14.

Additional analyses

Similar to study 1, I also ran a series of additional analyses examining whether importance of a savings goal differed across conditions. First, I tested whether (savings) goal importance differed across conditions conducting an ANOVA with goal importance as the dependent variable, and depletion and marketing cue as the independent variables. The results yielded no significant main effects (depletion: F(1, 248) =.39, p = .53; marketing cue: F(1, 248) = 2.41, p = .12), nor a significant interaction (F (1, 248) = 3.04, p = .08); the top row of table 3 presents the means and standard deviations in each of the four conditions. I then tested whether goal importance influenced the WTS measure (by condition) and found no significant relationships (all p > .20); see the bottom row of table 3, which provides the correlations (and p-values).

Table 3. Mean importance of the saving goal, and correlations between goal importance and WTS (study 2)

	Nondepletion		Depletion	
	Brand	Slogan	Brand	Slogan
Goal importance	6.15 (.90)	6.17 (.99)	6.29 (.92)	5.87 (1.16)
Correlation between goal importance and WTS	-.17 (.20)	-.07(.59)	-.12 (.34)	-.12 (.36)

Note: The values in parentheses represent the standard deviations for the goal importance measure (top row) and *p*-values for the correlations (bottom row).

Discussion

The results of study 2 produced support for the prediction that consumers' vicarious experience in depletion will increase their willingness-to-spend when exposed to a slogan compared to non-vicariously depleted consumers, which provides support for hypothesis 2. Even though the mediation analysis showed no support for the mediating effect of perceived persuasion on the relationship between the exposure to marketing cue and willingness to spend, my findings did partially support hypothesis 3 – that is, under nondepletion, exposure to slogans increased people's perceived persuasion compared to exposure to brands. Under depletion, perceived persuasion ratings for slogans were similar to those for brands.

General Discussion

Summary of results

Previous studies have focused on the effects of various marketing strategies on consumer behaviour, especially between brands and slogans, and found that whereas exposure to brands makes consumers behave consistent with the brand's image (i.e., a classic priming effect), exposure to slogans instead links to behaviours that are inconsistent with the brand's image (i.e., a reverse priming effect). Persuasion knowledge has also received attention from researchers as this concept can, in part, explain the mechanism behind the reverse priming effect. Past research

has also investigated the mechanism behind counterargument and how it works against or for consumers. Janssen, Fransen, Wulff, and Reijmersdal (2016) pointed out the moderating role of self-control in the context of how it influences consumers' ability to response to their perceived persuasion influenced by brand disclosure. However, it is not clear if self-control also serves the same role in the context of reverse priming effect of slogans. The primary objective of this research was to investigate whether the reverse priming effect of slogans changes with individual's level of self-control resources. Additionally, this research examined what happens when depletion is experienced vicariously. Finally, this research focused on testing whether depletion could affect individuals' perceived persuasion following exposing to various marketing cue in a way that under nondepletion (depletion), exposure to slogans would result in a higher (lower) level of perceived persuasion intent relative to brand exposure.

The purpose of study 1 was to examine if depletion can attenuate the reverse priming effect of slogans. The results of study 1 replicated prior findings showing the expected priming effect of brands, and the reverse priming effect of slogans, on behaviour (Laran et al., 2011). Going beyond replication, however, the results of this study also provided support for my first hypothesis: depleted participants showed less willingness-to-spend when exposed to a slogan compared to nondepleted participants. This finding illustrated that the reverse priming effect of slogans (when a consumer behaves opposite to the brand's image) was attenuated when consumers were in a state of depletion.

Study 2 was firstly designed to improve the generalizability of findings based on Study 1. Specifically, Home Depot was applied as the brand with a saving goal to replace Walmart. Study 2 also examined whether the attenuation effect found in study 1 could also appear when depletion was manipulated vicariously. Lastly, the effect of perceived persuasion on the relationship between marketing cue and depletion on WTS was also measured. The results of study 2 provided support for the priming effect and the reverse priming effect, using a different brand (and slogan). The results of study 2 also provided support for the second hypothesis in a way that vicarious experience in depletion lowered participants willingness-to-spend when exposed to a slogan. However, the mediating effect of the perceived persuasion on the relationship between the exposure to marketing cue and depletion on WTS was not significant.

Theoretical contributions

First, this research contributes to the literature on the process model of depletion. It extends the depletion research to a new area where the process model of depletion is applied to attenuate the reverse priming effect of slogans. This is a huge step to not only help marketers to understand a possible timing for slogans placement that can maximize the persuasive effectiveness, but also to help consumers be more aware that prior self-control efforts can impact their subsequent behaviours. Secondly, this research provides support to the existing focus of research on the process model of depletion, which is the moderation effect. Moreover, this research also shows a special case where the effect of depletion can work in consumers' favour in terms of less spending, which contradicts previous research where the effect of depletion is identified as a negative influence on people's decision making. Lastly, this research also investigates whether the effect of depletion on slogan effectiveness can occur when the depletion is experienced vicariously. This is an extended research from previous studies on examining the impact of vicarious depletion on reactions to persuasive attempts (Ackerman, 2018; Wheeler et al., 2007).

Managerial implications

In terms of practical implications, the findings provide important implications for consumers to understand how exposure to slogans can impact their purchase behaviour while being depleted or vicariously depleted. Additionally, this will also help marketing practitioners to reinforce their decision makings in terms of placing slogans in scenarios that make people easily depleted or vicariously depleted to maximize its effectiveness. Last but not the least, the findings on the role of vicarious depletion on changing people's behaviour also help to understand organizational behaviour on teamwork where a positive group effective tone (high level of mutual perspective taking) may result each member can be much easily affected by each other physically and mentally.

Limitations and future research

The current research possessed several limitations that provide opportunities for future research. First of all, following the concept of the process model of depletion where identified the performance impairment at Time 2 after exerting self-control resources at Time 1, the current research design required participants to engage in sequential tasks. However, Muraven, Shmueli,

and Burkley (2006) pointed out that people may withhold their self-control resources for future demanding tasks away from the survey. Thus, future research is needed to record participants' willpower status before starting the survey. Also, Inzlicht and Schmeichel (2012) proposed two processes behind the self-control exertion at Time 1 leading to the self-control failure at Time 2. One emphasizes the shift in motivation, while the other focuses on the shift in attention. Future research is needed to uncover which process is more dominating when depleted people encounter persuasive marketing cue. The current research failed to find support for whether the perceived persuasion can predict consumer behaviour. There may be possible to have another mediator on the effect of perceived persuasion on consumer behaviour. In line with the process model of depletion, the level of motivation or attention could possibly be that mediator. Specifically, when the perceived persuasion is generated, people may become more motivated to react to or pay more attention to the source of persuasion. Thus, future research is needed to investigate a possible mediator on the relationship between the perceived persuasion and consumer behaviour.

Second, the generalizability of the current findings is limited considering that the brands used in my studies, though different, were both associated with saving money. Future research is needed to test the current findings on brands that focus on other consumer goals (e.g., prestige: Lexus or Tiffany, creativity: Apple or Tesla). Additionally, the quality of counter-attitudinal messages may impact depleted/nondepleted people's perceive persuasion (Wheeler et al., 2007). Specifically, depleted people and nondepleted people held similar attitudes toward strong messages; however, depleted people held more positive attitudes toward weak message than nondepleted people. It could be possible, for example, that when a brand's slogan is less connected to a monetized behaviour (e.g., "Nike. Just Do It."), people are less likely to associate it as a cue influencing their purchasing behaviour, which can be considered as a weak message that is unlikely to raise suspicions from consumers. Thus, future research should examine different brands (and consumer goals), as well as vary the strength of the marketing message. In the article by Laran et al. (2011), the unfamiliarity was controlled by using well-known brands to clear out biases, which was the method that the current study followed. However, using well-known brands such as Walmart and Home Depot could impact the results of comparison of perceived persuasion toward a brand and its slogan. Possibly, seeing a well-known brand could unconsciously remind

participants of its associated slogan. Thus, the difference between the perceived persuasion toward a brand and its slogan became insignificant

Third, a goal of my thesis was to help consumers understand how their psychological mechanisms operate when exposed to a brand or a slogan. However, it lacks generalizability considering brands/slogans are not the only form of marketing strategies that consumers encounter every day. Other types of marketing cue such as a friendly employee's smile, a discount sign, celebrity endorsement ads, and so on can also implicitly influence consumer behaviour. Future research is needed to develop a richer framework for priming effects in marketing using various marketing cue.

Lastly, the current research design did not include a condition that assessed WTS with no exposure to marketing cue. Future research is needed to include a "pure" condition. Also, both studies were conducted online, and using hypothetical measures (of spending). It would be beneficial for future research to study the effect of depletion on slogan and brands in a more realistic environment. For example, given that the mental simulation of social information, such as watching athletes getting tired, will also lead observers to be vicariously depleted (Akerman, 2018), a field study could be designed to examine the effect of slogans placed in a sports game (e.g., a basketball game). Further, because depletion will be occurring while participants are exposed to the slogan, and not in a sequential order, this type of future study could also contribute to our understanding of the process model of depletion.

Conclusion

The current study extends previous research on the reverse priming effect of slogans by applying the process model of depletion. In doing so, I showed that depletion can attenuate the reverse priming effect of slogans on behaviours (Study 1). Study 2 reproduced and extended the findings of Study 1 by examining if the reverse priming effect can be attenuated under the effect of vicarious depletion using a different brand with saving goals. Study 2 also provided support to previous findings on how exposure to slogans could lead to higher perceived persuasion than exposure to brands. The higher perceived persuasion caused by exposure to slogans could be adjusted to be similar to those caused by exposure to brands under the effect of depletion. However,

Study 2 failed to support the mediating effect of perceived persuasion to illustrate how the perception of marketing cue was linked to spending decisions. Although additional research is needed to examine boundary conditions, and further test the underlying mechanism of the reverse priming effect, this appears to be a valuable area for future research as it may help marketers and consumers better understand the relationships between everyday persuasive marketing cue and self-control.

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Appendices

Appendix A: Study 1 (Pretest)

Below are the marketing cue shown to participants during the pretest.

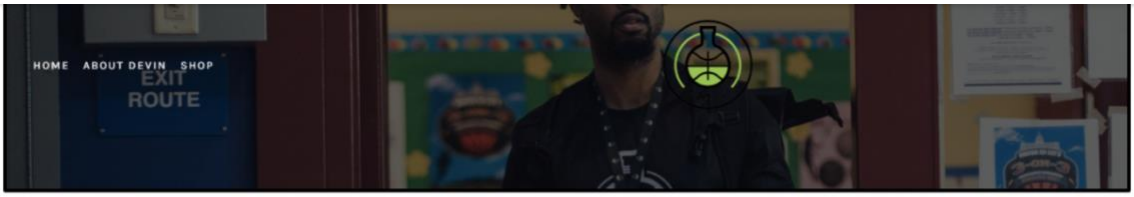
Brand condition:

Slogan condition:

Appendix B: Study 1 (Marketing Cue Manipulation)

Below are screenshots of the "blog" used in Study 1.

Brand condition:



ABOUT DEVIN WILLIAMS

In 2008 author Malcolm Gladwell stated in his book, Outliers: Story of Success, in order to have success in any field, 10,000 hours of practice and training must be achieved. Filmmaker and basketball trainer, Devin Williams, captures the art of filmmaking through his passion and love for basketball in the world-renowned YouTube series TEN000HOURS.

Devin, born and raised in Gardena, California began playing basketball at the age of 8. After playing for and graduating from Price High School, Devin attended the Fresno State University before transferring to the Academy of Arts in San Francisco, where he would complete his basketball playing career.

For a class project in college, Devin was asked to create and produce a "Day In The Life" video. Behold the first episode of TEN000HOURS was born. Capturing a "Day In The Life" of a youth basketball player and uploading it to YouTube may have been intended for his professor, but ended up going viral worldwide.

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FUN FACTS

Most played song on your iPod? – I only play my instrumentals that are in my videos.

What is your favorite basketball move? – The Allen Iverson crossover.

If you could have lunch with one person, living or dead? – Easy, Morgan Freeman.

MORE BLOG CATEGORIES

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Based on the blog that you read on the previous page, please answer the following questions:

1. Are you a blogger?

- Yes
- No

2. Do you think the author did a good job of demonstrating how the blogger became a trainer in a clear and logical way?

	Not at all			Somewhat			Very much so

3. Do you think the fun facts are necessary for any blogger to include in their introduction?

	Strongly disagree			Not sure			Strongly agree

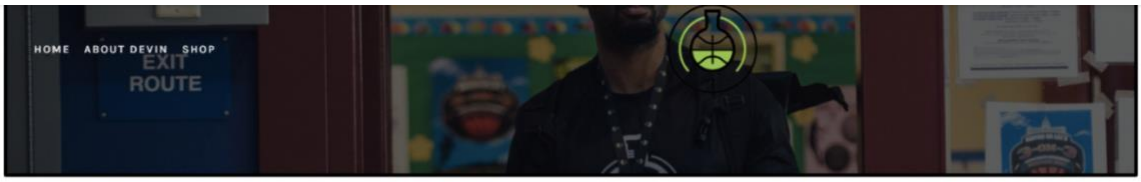
4. Who do you think this blog would be the most perfect fit for?

- People who are interested in starting their own blogs
- Basketball lovers
- Trainers
- Youtubers

5. Would you recommend this blogger to your friends?

- Yes
- No

Slogan condition:



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	Not at all			Somewhat			Very much so

3. Do you think the fun facts are necessary for any blogger to include in their introduction?

	Strongly disagree			Not sure			Strongly agree

4. Who do you think this blog would be the most perfect fit for?

- People who are interested in starting their own blogs
- Basketball lovers
- Trainers
- Youtubers

5. Would you recommend this blogger to your friends?

- Yes
- No

Appendix C: Study 2 (Pretest)

Below are the marketing cue shown to participants during the pretest.

Brand condition:

Slogan condition:

Redefining Love's Special Moments

More saving.
More doing.

Appendix D: Study 2 (Vicarious Depletion Manipulation)

Below is the story shown to participants in Study 2:

A Short Story

I work as a server in a good restaurant. The restaurant is not too fancy, but it serves really tasty food. It's a good job.

When I arrive at work today, I am starving! I haven't eaten anything since a quick bite at breakfast, and I definitely won't be able to eat on the job. We are hosting a banquet celebration, which means a lot of meals to bring out.

When I walk into the kitchen, my stomach growls loudly and I know it's going to be a long night. I start carrying trays loaded down with every type of delicious dish imaginable. Platters of steaming dumplings, nachos with salsa and sour cream, succulent sausages, and gourmet sesame crackers topped with French spreads. And those are just the appetizers!

My mouth is watering as we bring out the chicken Alfredo. This is one of our restaurant's specialty dishes. I am literally almost drooling like a dog I am so hungry. And I can't eat anything. We are too busy, and I would probably be fired if my boss saw.

All around me, people are piling food onto their plates. The aroma from their plates fills the room—beef tenderloin, sweet corn, buttered potatoes, and just-baked bread. I try to keep my eyes focused on the floor and tables, and not on the food. I think I am beginning to hallucinate that the cheese tray is calling my name.

Then, it is time for dessert. A series of cakes are on the menu, and the one in front of me looks so delicious with its rich chocolate frosting. I think about dipping my finger into the frosting when no one is looking, but I am able to control myself. The tables are now piled high with vanilla cupcakes, pies filled with raspberries and peaches and topped with a flaky crust, and a decadent array of chocolate-covered strawberries. How much longer do I have to go on like this?

Below are questions following the “story reading” task:

Based on the story you just read, please answer the following questions:

1. The person in the story works as:

- A bus boy at a restaurant
- A cook at a restaurant
- A server at a restaurant
- A receptionist of a banquet celebration

2. Which one of the following items are mentioned as one of the specialty dishes?

- Gourmet sesame crackers topped with French spreads
- Chicken Alfredo
- Chocolate-covered strawberries
- Steaming dumplings

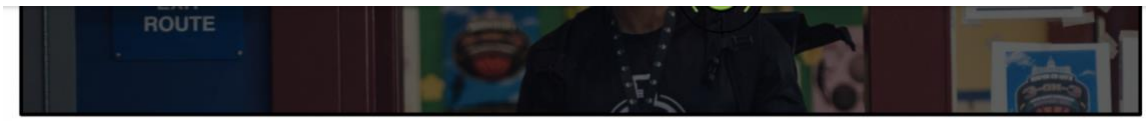
3. In the story you just read, did the person get caught by his boss?

- Yes
- No

Appendix E: Study 2 (Marketing Cue Manipulation)

Below are screenshots of the "blog" used in Study 2

Brand condition:



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Slogan condition:

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Appendix F: Study 2 (Mediation Analysis)

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.3 ******************

        Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model: 8
    Y: Spending
    X: Slogan
    M: Persuasi
    W: Deplete

Sample
Size:  252

**************************************************************************
OUTCOME VARIABLE:
 Persuasi

Model Summary
        R       R-sq        MSE          F        df1        df2          p
     .1454      .0211     2.6270     1.7858     3.0000   248.0000      .1504

Model
            coeff         se          t          p       LLCI       ULCI
constant   4.6774      .2058    22.7234      .0000     4.2720     5.0828
Slogan      .6303      .2877     2.1905      .0294      .0636     1.1970
Deplete     .4654      .2827     1.6466      .1009     -.0913     1.0222
Int_1      -.6095      .4100    -1.4867      .1384    -1.4170      .1980

Product terms key:
 Int_1:       Slogan   x       Deplete

Test(s) of highest order unconditional interaction(s):
      R2-chng          F        df1        df2          p
X*W      .0087     2.2102     1.0000   248.0000      .1384

**************************************************************************
OUTCOME VARIABLE:
 Spending

Model Summary
        R       R-sq        MSE          F        df1        df2          p
     .1710      .0292     5026.7539     1.8596     4.0000   247.0000      .1181
```

Model

	coeff	se	t	p	LLCI	ULCI
constant	88.3803	15.8077	5.5910	.0000	57.2452	119.5154
Slogan	31.8947	12.7073	2.5099	.0127	6.8662	56.9233
Persuasi	.5946	2.7777	.2140	.8307	-4.8765	6.0656
Deplete	9.1477	12.4322	.7358	.4625	-15.3389	33.6343
Int_1	-33.8928	18.0134	-1.8815	.0611	-69.3724	1.5867

Product terms key:
Int_1: Slogan x Deplete

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0139	3.5402	1.0000	247.0000	.0611

Focal predict: Slogan(X)
Mod var: Deplete(W)

Conditional effects of the focal predictor at values of the moderator(s):

Deplete	Effect	se	t	p	LLCI	ULCI
.0000	31.8947	12.7073	2.5099	.0127	6.8662	56.9233
1.0000	-1.9981	12.7754	-.1564	.8758	-27.1606	23.1645

********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********

Conditional direct effect(s) of X on Y:

Deplete	Effect	se	t	p	LLCI	ULCI
.0000	31.8947	12.7073	2.5099	.0127	6.8662	56.9233
1.0000	-1.9981	12.7754	-.1564	.8758	-27.1606	23.1645

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
Slogan -> Persuasi -> Spending

Deplete	Effect	BootSE	BootLLCI	BootULCI
.0000	.3747	1.8587	-3.4135	4.3189
1.0000	.0124	.7749	-1.4914	1.8764

Index of moderated mediation (difference between conditional indirect effects):

	Index	BootSE	BootLLCI	BootULCI
Deplete	-.3624	1.9521	-4.4482	3.9191

********** ANALYSIS NOTES AND ERRORS **********

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

NOTE: Variables names longer than eight characters can produce incorrect output.
      Shorter variable names are recommended.

------ END MATRIX -----